

Claims

1. A radio operating system having

- a radio base station (2) provided for controlling a device;
- an operating element (3), provided for establishing radio communication with the radio base station, wherein
 - the operating element (3) has a control unit (8), with a first threshold value (S1) relating to a reception parameter (K), as a function of which a switchover is provided between various operating modes (B0, B1) of the operating element (3);
 - upon undershooting of the threshold value (S1), a safety-oriented operating mode (B0) is provided and if the threshold value (S1) is exceeded, a standard operating mode (B1) of the operating element (3) is provided,
 - a first, non-safety-critical command set (BS1), activatable by means of the operating element (3), is usable equally in the various operating modes (B0, B1);
 - a second, safety-critical command set (BS2), activatable by means of the operating element (3), is usable in the safety-oriented operating mode (B0), if at all, only with restrictions, compared to the standard operating mode (B1).

2. The radio operating system as recited in claim 1, characterized by a confirmation input device (12), by whose actuation the safety-critical command set (BS2) is usable in the safety-oriented operating mode (B0) in a way corresponding to the standard operating mode (B1).

3. The radio operating system as recited in claim 1 or 2, characterized in that the operating element (3) has a display device (13) provided for displaying the operating mode (B0, B1).

4. The radio operating system as recited in one of claims 1 through 3, characterized in that the operating element (3) has an acoustic output device (11).

5. The radio operating system as recited in one of claims 1 through 4, characterized by a second threshold value (S2) pertaining to a reception parameter (K), upon whose undershooting, switching off of the radio connection between the operating element (3) and the radio base station (2) is provided.

6. A method for operating a radio system having at least two parties, wherein

- the transmission quality of the radio communication between the parties (2, 3) is measured;
- the transmission quality is compared, on the basis of a reception parameter (K), with a threshold value (S1);

- as a function of the magnitude of the reception parameter (K) in relation to the threshold value (S1), various operating modes (B0, B1) are activated, namely a safety-oriented operating mode (B0) if the threshold value (S1) is undershot and a standard operating mode (B1) if the threshold value is exceeded;
- for operating the radio communication, a first, non-safety-critical command set (BS1), and a second, safety-critical command set (BS2) are provided;
- the use of both command sets (BS1, BS2) is enabled without restriction in the standard operating mode (B1);
- in the safety-oriented operating mode (B0), the use of only the first command set (BS1) is enabled without restriction, while the usability of the second command mode (BS2) is restricted.

7. The method as recited in claim 6, characterized in that the full functional scope of the standard operating mode (B1) is enabled in the safety-oriented operating mode (B0) by actuation of a confirmation input device (12).

8. The method as recited in claim 7, characterized in that the use of the full functional scope of the standard operating mode (B1) is enabled in the safety-oriented operating mode (B0) solely during the actuation of the confirmation input device (12).

9. The method as recited in claim 7, characterized in

that by the actuation of the confirmation input device (12) in the safety-oriented operating mode (B0), a time slot is opened, within which the functional scope of the standard operating mode (B1) is enabled.

10. The method as recited in one of claims 6 through 9, characterized in that upon switchover from the standard operating mode (B1) to the safety-oriented operating mode (B0), an optical report is output.

11. The method as recited in one of claims 6 through 10, characterized in that if a function associated with the safety-critical command set (BS2) is chosen in the safety-oriented operating mode (B1), an acoustic warning report is output.

12. The method as recited in one of claims 6 through 11, characterized in that if the radio communication between the parties (2, 3) is broken because of the transmission quality, an acoustic report is output.

13. The method as recited in one of claims 6 through 12, characterized in that the reception parameter (K) contains information pertaining to the reception quality of the radio communication between the parties (2, 3).

14. The method as recited in claim 13, characterized in that the reception parameter (K) contains information pertaining to the reception field intensity at the location of one party (2, 3).

15. The method as recited in claim 13 or 14, characterized in that the reception parameter (K) includes information pertaining to the bit error rate of the radio communication between the parties (2, 3).

16. The method as recited in one of claims 6 through 15, characterized in that the reception parameter (K) includes information pertaining to the distance between the parties (2, 3).

17. The method as recited in claim 16, characterized in that the reception parameter (K) is ascertained by transit time measurement.